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BOIL WATER EVENTS

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Frequently Asked Questions from Dental and Medical Offices

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5 Questions from medical offices, doctors, dentists, and dialysis centers often arise during a boil
6 water event. Below are answers to questions that are commonly asked.

7

8 **Q1 - Why was a boil water notice issued for drinking water that serves my office?**

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10 A boil water notice is issued by water utilities and health agencies to protect consumers from
11 potentially contaminated drinking water. Boil water responses are typically used when a condition
12 has occurred that creates a potential for biological contamination in water within the drinking
13 water distribution system, or when water samples indicate that contamination is present. Common
14 reasons for a boil water notice include loss of pressure in the distribution system and unexpected
15 water quality problems. These may in turn be the result of other events such as water line breaks,
16 treatment disruptions, power outages, floods and other forms of severe weather.

17

18 **Q2 - How long will the need to boil water continue?**

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20 Public notification will be given to inform you when the boil water notice is lifted. Your water
21 utility and your local health department office can also give you details on how long your boil
22 water notice might last and will advise you when it is safe to return to normal water use.

23

24 Typically a boil water event lasts for 48 hours, but this can be longer and the need to boil water
25 may last for several days or more. How long depends on the conditions that caused the need to
26 boil, how quickly the conditions can be corrected, and how long it takes for laboratory results to
27 confirm that your water is again safe to drink.

28

29 **Q3 - Should I close my office?**

30

31 Unless the Health Department specifically directs your closure, this is a decision you need to make
32 as a medical professional. If you cannot ensure that your patients, staff, and the public will be
33 protected from exposure to potentially contaminated water, by either pathogens or opportunistic
34 organisms, you should consider closing until your water is again potable and safe for use. If you
35 must remain open to provide essential services, or if you want to stay open to continue treating
36 your patients, you must make sure every appropriate precaution is taken to effectively eliminate all
37 possible exposures.

38

39 **Q4 - Is there a recommended standard for treating water by boiling?**

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41 Boiling water is a sure method you can use to kill harmful waterborne bacteria, viruses and
42 parasites. Bring water to a **FULL ROLLING BOIL** for **1 MINUTE**, then allow the water to
43 **COOL BEFORE USE**. Because water may take 20 or 30 minutes to cool, plan ahead. Make up
44 a batch or two of boiled water in advance so you will not be tempted to use it hot and risk scalds or
45 burns. Boiled water may be used for drinking, cooking and washing.

46

47 **Q5 - Are there any other disinfection methods I can use in lieu of boiling?**

48

49 Boiling and bottled water are the most reliable means to ensure safe potable water during a boil
50 water event and should always be your first choices. However, it may be impractical to boil the
51 water needed for some purposes. In extended emergencies, such as an area wide power outage,
52 potable water that needs no further treatment may be supplied by your water utility or local
53 emergency response agency from a tanker truck or a water trailer called a water "buffalo".

54

1 There are also disinfection methods using ordinary household chemicals that can be used if
2 needed. These can be found in several publications, including the State Department of Health
3 pamphlet "Don't Be Left in the Dark", available through your local health department or on the
4 Department's website at: <http://www.health.state.ny.us/environmental/emergency/flood/>
5

6 CAUTION - Chemical disinfection is limited in effectiveness for *Cryptosporidium* and *Giardia*,
7 and is not appropriate for very turbid (muddy) water, or where raw sewage or other fecal matter
8 may be present. In this case **only use** an acceptable alternate source of water.
9

10 **Q6 - What is an acceptable alternate source?**

11 Acceptable alternate sources of drinking water may include:

- 13 • Water from another public water supply (one that is not operating under a
14 boil water notice)
- 15 • Bottled water that is certified for sale in New York State
- 16 • Water from a New York State certified bulk water hauler
- 17 • Water provided in a State Emergency Management Office (SEMO) tanker
18

19 Roadside springs are **not** a sure source of safe drinking water, since they are seldom monitored and
20 no one is in charge of keeping them safe. If you do use roadside spring water for drinking or food
21 preparation, we recommend that you boil (and then cool) it before use.
22

23 **Q7 - Is it safe to use bottled water?**

24
25 It is very safe to use bottled water that is certified for sale in New York State. Such water may be
26 used for drinking, cooking, and washing with no further treatment. Bottled water may be
27 preferable when boiling is not possible or is inconvenient. It is always a good idea for facilities to
28 keep an emergency supply of bottled water on hand for just such a use.
29

30 **Q8 – What is the shelf life/expiration date for bottle water?**

31
32 Many manufacturers advise a two year period for taste, but bottled water can be used indefinitely if
33 stored properly. The International Bottled Water Association advises consumers to store bottled
34 water at room temperature (or cooler), out of direct sunlight and away from solvents and chemicals
35 such as gasoline, paint thinners and dry cleaning chemicals.
36

37 **Q9 - Is it safe to use water from a bulk water provider?**

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39 Bulk water is not as convenient as bottled water, but can be a much welcomed and safe alternate
40 water source, and in extended emergencies may be provided to you at no charge.
41

42 Water that is provided from a State Emergency Management Office (SEMO) tanker or from a New
43 York State certified bulk water hauler will be safe for drinking, cooking, and washing with no
44 further treatment. Depending on the specifics of a boil water event, temporary water stations may
45 be set up by your water utility, local government agency or county emergency response agency. In
46 these cases, the water provided will be from an approved source and there will be oversight of the
47 water delivery operation to assure the water is safe for your use.
48

49 If you arrange and receive bulk water on your own, verify that the bulk hauler is certified in New
50 York State. Also ask the hauler to verify that the water being delivered is from a source that has
51 been approved by the Health Department, or from another public water supply that is not operating
52 under a boil water notice. Also ask the hauler to verify that the water was transported in a
53 dedicated water tanker and is safe for consumption. A list of NY State certified bulk water haulers
54 is available online at:

2
3 **Q10 - What infectious organisms might be present in contaminated water?**

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5 There are many possible water borne pathogens. The organisms of concern in New York State
6 include protozoa such as Giardia and Cryptosporidium; bacteria such as *Eschericia coli* and
7 species of *Shigella*, *Salmonella*, *Vibrio*, *Camphylobacter*; and viruses such as Hepatitis A,
8 Adenoviruses, Hepatitis E, Enteroviruses (including Polio-, Echo, and Coxsackie viruses),
9 Rotaviruses and Caliciviruses.

10
11 These organisms primarily affect the gastrointestinal system, causing diarrhea, abdominal cramps,
12 nausea, and vomiting with or without fever. Sometimes these illnesses are contracted by ingesting
13 contaminated water, and in some circumstances skin contact could also lead to infection. Most of
14 these illnesses are not usually serious or life threatening except in the elderly, the very young or
15 those who are immune compromised.

16
17 There is also the potential for opportunistic organisms, such as nontuberculous mycobacteria and
18 *Ralstonia Pickettii*, to be present in the water which may put immunocompromised or other wise
19 sick patients at risk.

20
21 **Q11 - In my medical practice, does the boil water order/notice apply to water used for**
22 **patients? Staff?**

23
24 Yes, it absolutely does apply to both. Boil water orders/notices are usually issued because of the
25 potential for biological contamination. There is potential exposure to your patients, the public, and
26 your staff from direct consumption, dermal contact and accidental ingestion. Exposures can also
27 occur from medical procedures and equipment that needs water for operational and/or sanitizing
28 processes, such as from rinse water contact with aggravated gums and open mouth sores.

29
30 **Q12 - What should I do about sinks and fountains?**

31
32 All fountains and sinks accessible to the public should be shut off until the boil water order/notice
33 is lifted and the water lines feeding them have been flushed. If this is not possible, then signs that
34 legibly state "Do Not Drink" must be posted on all fountains and sinks, and bottled or boiled water
35 must be provided at a convenient location so that no one is tempted to ignore the signs.

36
37 Similar measures should be provided to locations where staff can access potentially contaminated
38 public water, even if no patients or public normally visit that location.

39
40 **Q13- What specific measures should I take to protect my Dental patients?**

41
42 The Centers for Disease Control and Prevention's "Guidelines for Infection Control in Dental
43 Health Care Settings, 2003" provides the following guidance for boil water events:

44
45 *I. The following apply while a boil water order/notice is in effect:*

- 46
47 a) *Do not deliver water from the public water system to the patient through the dental*
48 *operative unit, ultrasonic scaler, or other dental equipment that uses the public water*
49 *system*
50 b) *Do not use water from the public water system for dental treatment, patient rinsing, or*
51 *hand washing.*
52 c) *For hand washing, use antimicrobial-containing products that do not require water for*
53 *use (e.g. alcohol-based hand rubs). If hands are visibly contaminated, use bottled*
54 *water, if available, and soap for handwashing or an antiseptic towelette.*

1
2 *II. The following apply when the boil water order/notice is cancelled:*
3

- 4 a) *Follow guidance given by local water utility regarding flushing of water lines. If no*
5 *guidance is provided, flush dental waterlines and faucets for 5 minutes before using*
6 *public water for patient care.*
7 b) *Disinfect dental waterlines and equipment as recommended by the dental unit*
8 *manufacturer.*
9

10 Additionally, we would recommend disinfecting all other work surfaces that may come into
11 contact with dental tools or equipment that may come into contact with patients, as well as
12 flushing other appliances in the office that may use public water (such as water heaters, ice
13 makers, drinking water fountains, etc.).
14

15 **Q14 - What specific measures should I take to protect my Dialysis patients?**
16

17 Regulations of the U.S. Department of Health and Human Services, Centralized Medicaid and
18 Medicare System (CMS) require that dialysis units be supplied a very high quality water that meets
19 the standards set by the Association for Advancement of Medical Instrumentation (AAMI).
20

21 If your dialysis center is equipped with a supplemental water treatment system that meets the
22 AAMI water quality standards, and is operated in full conformance with the CMS regulations, you
23 should be able to continue treating patients without the need for boiling or other supplemental
24 disinfection. To help ensure that you meet these standards, it is recommended that your
25 supplemental water treatment system be run and maintained by an operator Certified in
26 Biomedical Nephrology Technology (CBNT) by the National Nephrology Certification
27 Organization (NNCO). Additionally, your operator should be aware of the boil water event so that
28 the operations of your supplemental system can be closely watched and adjusted if needed to
29 maintain AAMI quality water during the boil water event.
30

31 Do not continue to provide dialysis treatment if you are unsure whether your system is in full
32 compliance with the AAMI water quality standards and the applicable CMS regulations. If you
33 stop providing dialysis treatment as a result of potential water quality concerns, you must ensure
34 that all your patients receive their needed treatment at an alternative location.
35

36 Since few (if any) dialysis facilities provide water that is treated to AAMI standards to their sinks,
37 fountains, hot water tanks, etc., the same precautions appropriate for other medical facilities to
38 control potential exposures to patients, the public, and staff should be taken.
39

40 **Q15 - What other specific measures should I take in other medical offices/services?**
41

42 There is a broad array of potential equipment and procedures, which makes it impractical to
43 address them all. In general, accepted infection control procedures should be employed to
44 examine any equipment and procedures that bring patients into contact with water, and equipment
45 that utilizes water. Even when public drinking water is not under a boil water event, hydrotherapy
46 equipment, whirlpools, aerosol producing equipment, the small diameter plastic tubing or channels
47 in equipment can be colonized with micro organisms (pathogens or opportunistic) or cross
48 contaminated with patient derived materials. Exposing patients to water of uncertain
49 microbiological quality, despite the lack of documented adverse health effects, is inconsistent with
50 accepted infection-control principles (CDC – 2003).
51

52 Other specific items to consider during boil water events include, but are not limited to:
53

- 54 a) Do not deliver water from the public water system to the patient through any operative

- 1 unit or medical equipment that uses the public water system.
- 2 b) Do not use water from the public water system for oral solutions, contact with open
- 3 wounds or sores, internal treatment, patient rinsing or hand washing.
- 4 c) For hand washing, use your regular soap with boiled (then cooled) or bottled water.
- 5 Antimicrobial products that do not require water for use (e.g., alcohol-based hand rubs)
- 6 are less effective.
- 7 d) Tanks or basins of water should be evaluated for when they were last filled with public
- 8 water. Those filled recently should be considered suspect and evaluated further.
- 9

10 The following apply when the boil water order/notice is cancelled:

11

- 12 e) Follow guidance given by local water utility regarding flushing of water lines. If no
- 13 guidance is provided, flush waterlines and faucets for 5 minutes before using public
- 14 water for patient care.
- 15 f) Disinfect tubing, tanks, and equipment as recommended by the unit manufacturer.
- 16 g) Thoroughly wash down all surfaces that will come into contact with equipment and
- 17 items that will come into contact with patients.
- 18 h) Flush and disinfect other residential style appliances that utilize public water (such as
- 19 water fountains, hot water heaters, etc....).
- 20

21 **Q16 - Can I use hand sanitizing lotion or wipes?**

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23 Sanitizing wipes can certainly be used and are encouraged, but these are generally not as effective

24 as proper hand washing with soap and water. Alcohol based sanitizers work against many

25 common disease causing agents (*E. coli*, *salmonella*, and *campylobacter*), but may not be effective

26 for cryptosporidium and some bacterium spores. It is recommended that sanitizing wipes be

27 accompanied by an ample supply of boiled or bottled water for washing with your regular

28 antiseptic soap.

29

30 **Q17 - Can I use my equipment if I have a filter or other treatment on the water?**

31

32 A properly installed, operated and maintained reverse osmosis filter should provide adequate

33 protection. Other treatment devices will depend on the contaminant and equipment installed.

34 However, any treatment device must be properly installed, operated and diligently maintained in

35 order to ensure effectiveness. If you are at all uncertain of the capabilities of your reverse osmosis

36 unit or other treatment devices, do not rely on them to remove potentially harmful or opportunistic

37 pathogens. Instead you should use boiled (and then cooled) water or water from an acceptable

38 alternate source.

39

40 **Q18 - When can my medical office return to normal use of the public water?**

41

42 Your water utility and/or local health office can advise you when the public water supply is again

43 safe for normal use. However, because medical facilities serve people that are already ill or

44 immunocompromised, and may have unique equipment or plumbing, there are precautions that

45 must be taken before your office can return to normal use of the public water supply.

46

1 **Q19 - How do I make my medical office ready to again rely on public water?**
2

3 Your internal plumbing needs to be flushed of all water that may have entered the facility during
4 the time that the boil water order/notice was in effect. Depending on the physical layout of your
5 office and your water service connection, it may take several minutes and possibly much longer to
6 properly flush your plumbing. Individual facility managers should develop a flushing procedure
7 that is sufficient to completely clear all plumbing lines and fixtures of questionable water.
8

9 As a rule of thumb for facilities with simple plumbing, once the public water supply has been
10 deemed acceptable, cold water should be run on full from all outlets for at least 15 minutes. If
11 possible, run all the outlets at the same time to maximize the amount of water that flushes through
12 your plumbing system. To flush hot water tanks, run at least two full tank volumes to waste
13 through a tank drain (if possible) or through your hot water outlets. After flushing the tank, each
14 hot water outlet should be additionally flushed by running it to waste for at least 3 minutes each.
15

16 Some of your medical equipment may also need flushing or specific disinfection procedures may
17 need to be implemented before the equipment can be used for patients. If you do not have flushing
18 or disinfection procedures already available for your equipment, check with your equipment
19 supplier for advice.
20

21 If your facility has an ice machine, remove and dispose of all ice that may have been made during
22 the time that the boil water order/notice was in effect, and flush the supply line to waste before
23 placing the machine back into service.
24

25 **Q20 - Can I use my ice?**
26

27 Bagged or prepackaged ice made from a potable water source that is not under a boil water
28 order/notice may be used. Ice from your ice maker may be used **if** it can be positively confirmed
29 that it was **all** made well in advance of the boil water order/notice. Any ice made since the boil
30 water order/notice was issued, any ice whose age is uncertain, and any ice mixed with ice whose
31 age is uncertain, must not be consumed or used in preparing solutions, beverages, foods, or
32 equipment and surfaces that will contact open wounds, sores, membranes, or mouths of patients.
33

34 It is best to label ice as safe or unsafe and discard unsafe ice to prevent accidental use, unless it has
35 a critical use (i.e. cooling medicines in a power outage). Unsafe ice should not be placed into
36 direct contact with any items of concern (such as fruit or teething rings).
37

38 **Q21 - What about the ice machine?**
39

40 The ice machine should be disconnected from the water line, drained and should not be
41 reconnected until the lines and machine are properly flushed and disinfected (per the
42 manufacturer's directions) after the order/notice has been lifted. Disinfection should include the
43 ice bin itself and any scoops or ice containers associated with the machine.
44

45 More detailed information can be found in other fact sheets for certain consumers, such as homeowners or hospital and
46 resident medical facilities, which are available from the New York State Department of Health or from your local
47 health department.